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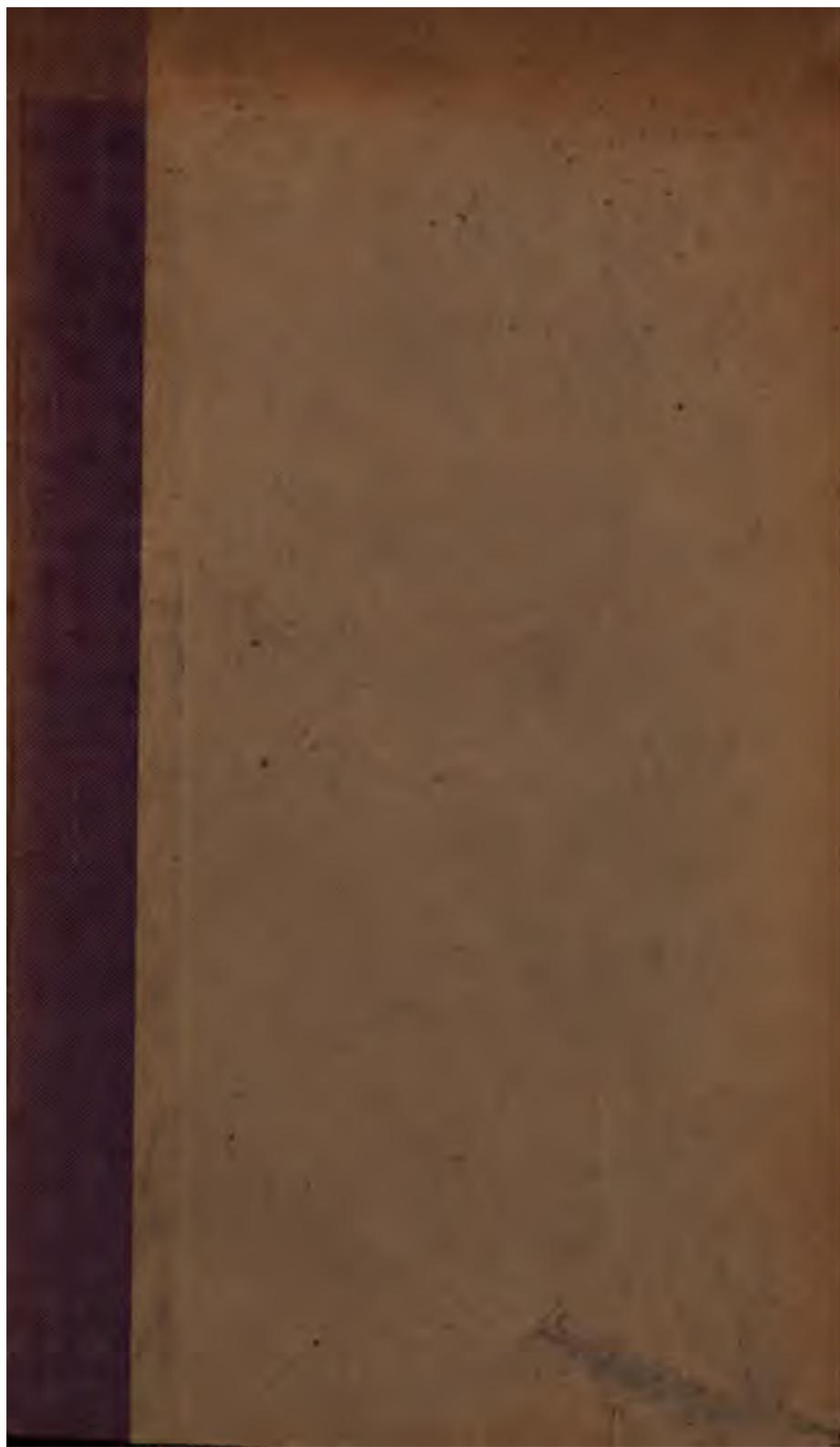
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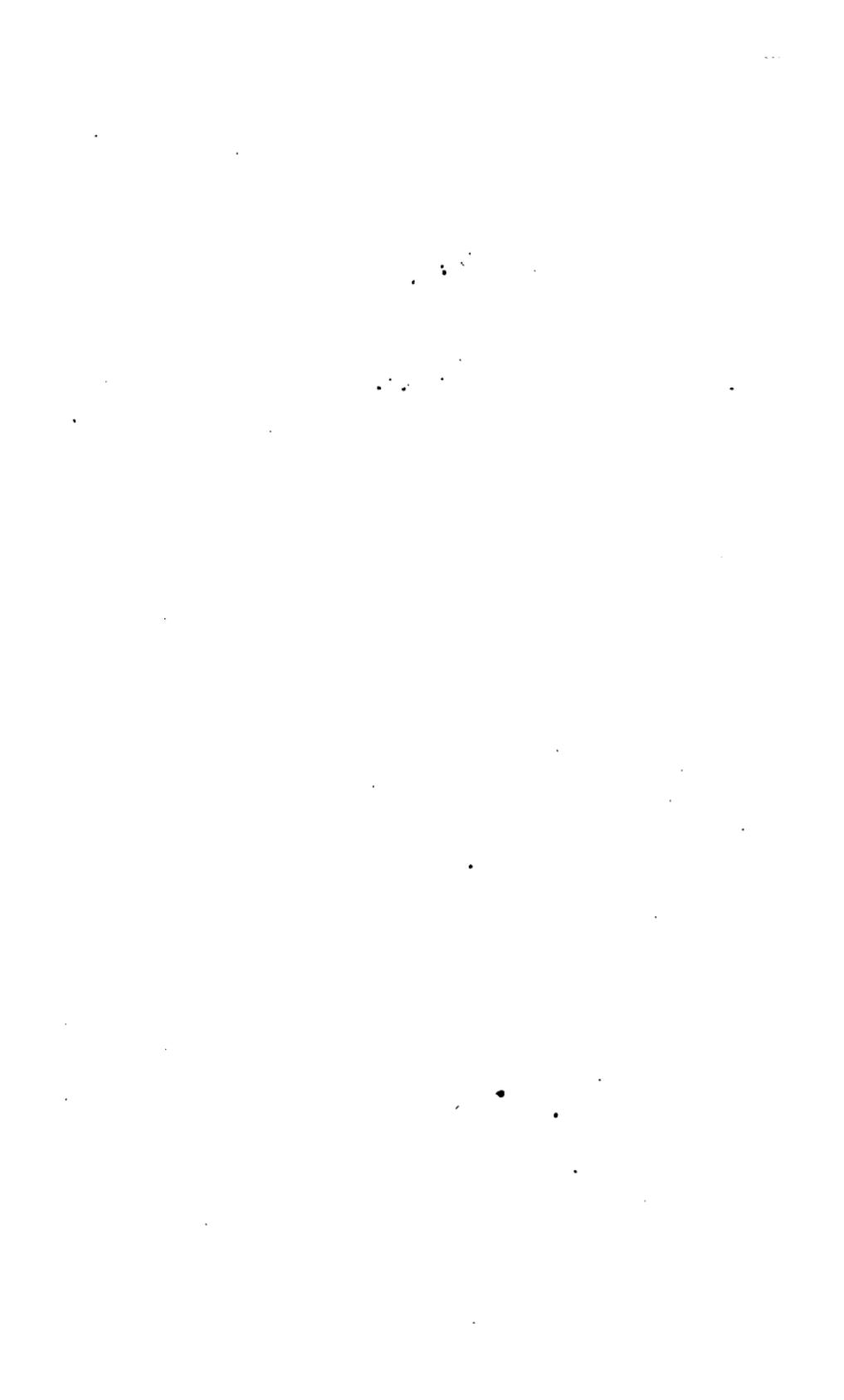
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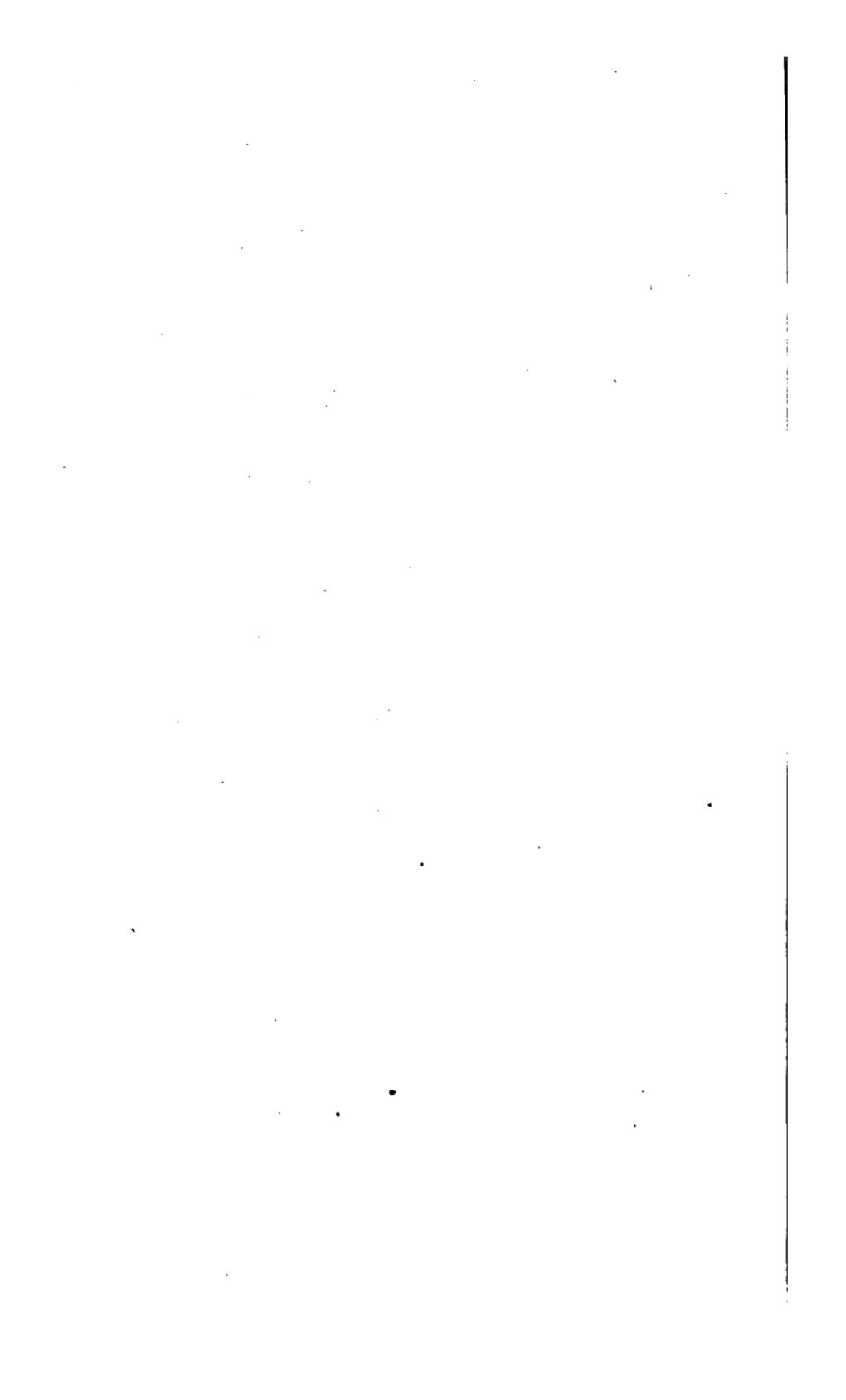
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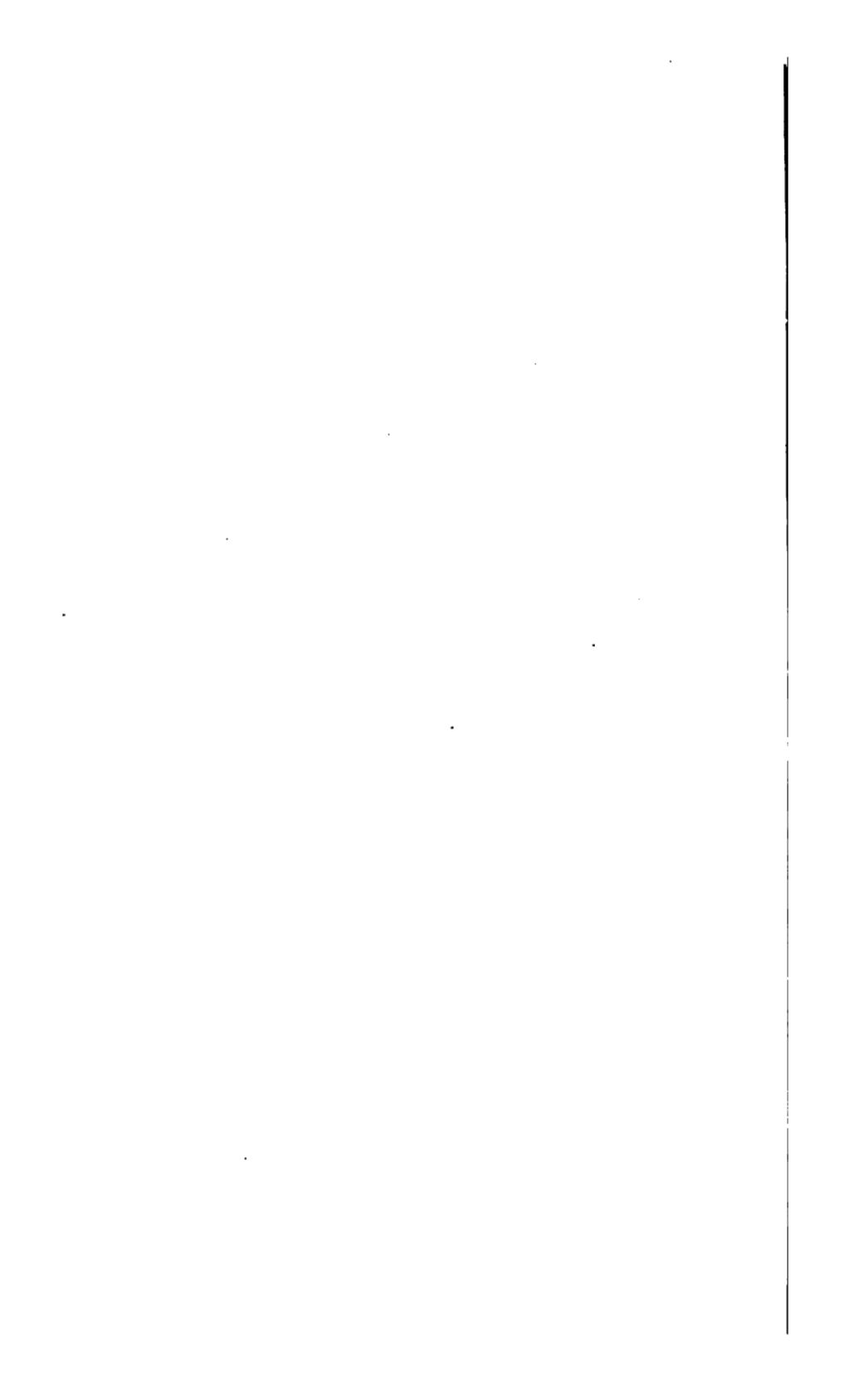
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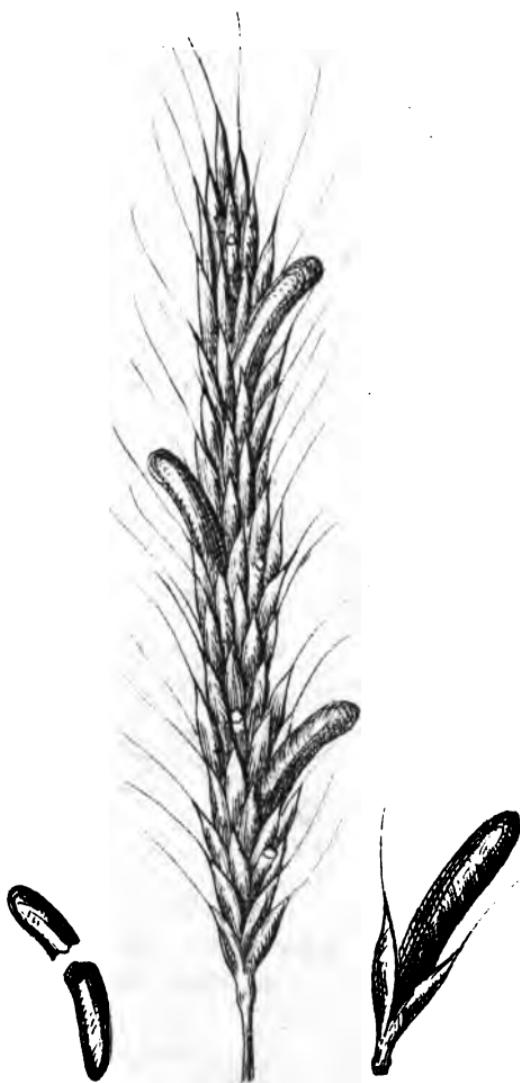




**A N E S S A Y**  
**ON THE CHEMICAL, BOTANICAL, PHYSICAL,**  
**AND**  
**PARTURIENT PROPERTIES**  
**OF THE**  
**S E C A L E C O R N U T U M.**







*Secale Cornutum*  
Craig, Rochdale.

AN ESSAY  
  
ON THE  
CHEMICAL, BOTANICAL, PHYSICAL,  
AND

PARTURIENT PROPERTIES  
OF THE  
SECALE CORNUTUM,  
WITH AN ENGRAVING.

---

BY T. H. WARDLEWORTH,

SURGEON.

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“Homo qui erranti comiter monstrat viam  
Quasi lumen de suo lumine accendat, facit,  
Nihilominus ipsi luceat, cum illi accenderit.”

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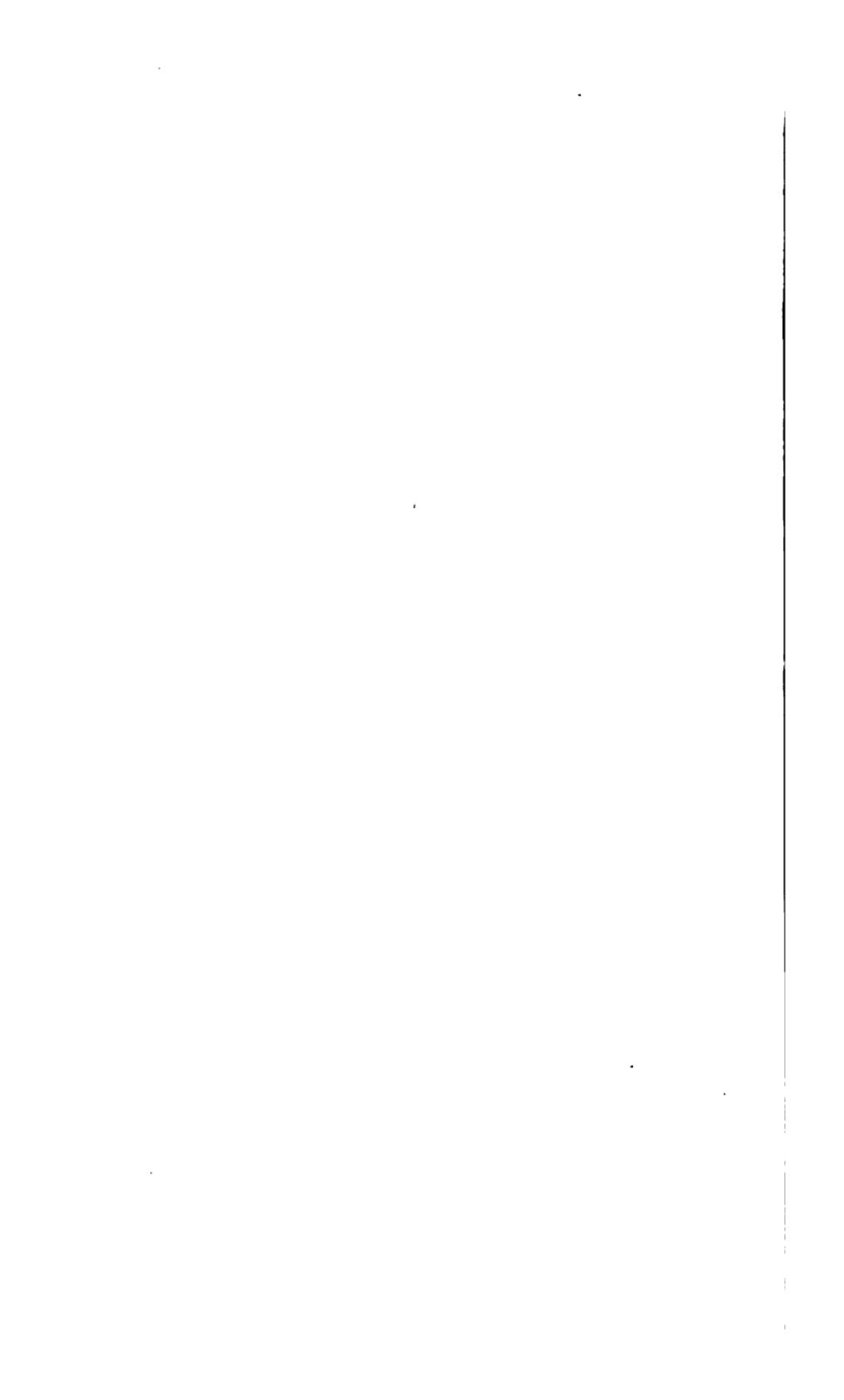
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Dedicated to  
**THOMAS RADFORD, Esq. M. D.**  
Fellow of the Royal College of Physicians,  
of Edinburgh,  
as a tribute of Gratitude,  
for the  
benefit derived from his valuable Course of Lectures,  
and  
as a testimony to the high standing  
in the Profession,  
which he has so honourably gained,  
this little work is inscribed  
by  
**THE AUTHOR.**



## P R E F A C E .

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The Author of the following pages has for some years been collecting materials for a small monograph, on the use of that important therapeutic agent, the Secale Cornutum. Delay has, in some measure, arisen from the author thinking that some one better able than himself would take up the subject, and discuss it in a manner characterized by zeal and ability. Extensive use has been made of Mr. Pereira's Lectures, published in the Medical Gazette; Dr. Neale's work on the Ergot of Rye; and Mr. Wright's excellent papers, which were published in the Edinburgh Medical and Surgical Journal, to whom the author feels deeply indebted for much valuable information, which he could not have obtained from any other source, without considerable difficulty and labour.

In that part of the Essay which treats of its parturifacient effects, the deductions and precepts are solely founded on, and derived from personal experience and acquaintance with its action, it being thought better to give a transcript of what has been seen and verified by himself, than a copious detail of what others in the profession have recorded, however much the latter would have rendered an essay more perfect and systematic.

'Rochdale,  
Sep. 20th, 1840.

ON THE  
PARTURIFACIENT EFFECTS  
OF THE  
SECALE CORNUTUM.

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As the Secale Cornutum has become more generally known, its virtues, as a parturient agent, have been better understood, and its reputation progressively established. With many practitioners, this medicine has already acquired the highest reputation in promoting the parturient throes; and should the pains become feeble and ready to cease, and even after nature has relinquished the struggle, this medicine has revived the energies of the system, and brought on a safe and satisfactory result, or when the labour is merely lingering, it also hastens the termination, while it increases the safety

alike of the mother and the child. In the author's practice, no immediate effects of an injurious nature have arisen from its use, nor has any unpleasant symptom occurred in the recovery of the patient; thus the author has no other than successful cases to record. Such of a contrary character, as have come to his knowledge through the medium of the press, or by correspondence, have not tended to shake the credit the medicine has acquired, but as the use of Secale Cornutum is of recent date, every untoward case, as it occurs, ought to be made public; if before this pamphlet leaves the press, any such should come to the knowledge of the author, notice will be given of it, and, if possible, inquiry made into the ground of the evil; without such a test, the real benefits to be afforded by the use of this medicine, will be curtailed, and with many practitioners doubts will be excited of its utility, and consequently, wholly omitted in many cases where it might most safely and advantageously have been used.

The history of the Secale Cornutum, as a medicine, is somewhat obscure. It appears to have been first used in America, and its discovery was probably fortuitous. It may have been that Rye, in some state of production, was given as food, under circumstances which excited attention by its effects on the uterus, and on inquiry into the cause might have led to the discovery of the blighted ear of the grain containing a specific influence on the action of the womb in parturition.

This powerful agent has been known under various names, as the SPUR, or ERGOT, ERGOTA, SECALE CEREALE, SCLEROTICUM CLAVUS, SPERMŒDIAE CLAVUS, SPHACELIA SEGETUM, but it is in this country best known by the term SECALE CORNUTUM. These terms are noticed that any student of medicine may find no difficulty when they occur in his reading. Ergot, botanically considered, appears to be a fungus belonging to the Gymnomycetous division, and constituting

one of two species of *Spermoedia*, admitted by **FRIES**. He calls it *Spermœdiæ Clavus*, and separates it from the genus *Scleroticum*, to which it had previously been referred, on account of its growing in the inside of other plants, and having no proper fructification. He defines the genus *Spermoedia* as follows: variable, rounded, utophytal, coatless, of a fleshy, mealy, homogeneous texture, with a rind concrete, scaly, or somewhat proinose, proper fructification none. And he adds, that it is only a morbid condition of the grain of corn, not propagated by seed, but generated by a particular combination of external influences, (*Cosmica Momenta*.) Such is the generally received opinion of different writers on Botany. As regards the formation of *Ergota*, whether we consider it in the light of a peculiar morbid growth, produced by a puncture analogous to the formation of the gallnut, or a diseased ovarium, or according to **ENDICHER**, "that it is a diseased state of the seed of grasses, swelling into a fungoid body, and

covered externally with powder." **DE** CANDOLLE is of opinion, "that it is a peculiar fungus, which attacks the ovary of grasses, and protrudes from them in a lengthened form, especially from Rye." And FONTANA asserts, "that the Secale Cornutum may be produced by contact;" this statement has however been contradicted, hence, we may regard the question under consideration, as being far from settled, the powdery efflorescence proceeding from its surface deserves a more particular examination than it has hitherto met with, and the microscopical anatomy of the production, in different states, requires to be far more carefully studied, before the true nature of Ergot can be positively determined. All who are interested with the importance of the subject, regret that so much darkness exists upon its botanical character.

It appears from the analysis of Wiggers, a German chemist, that 100 parts of Ergot contain,

Cerin .....	0.75
White crystallizable soft matter.....	1.04
A peculiar fixed oil.....	35.0
Substance resembling fungin of mushrooms.....	46.18
A reddish brown substance, which he calls Ergotin..	1.24
A substance resembling osmazome.....	7.76
A peculiar saccharine matter.....	1.55
Gummy extractive .....	2.32
Albumen .....	1.46

Besides saline and earthy matters in a very minute proportion.

The following is Wright's Analysis.

A thick white oil .....	31.00 grains
Osmazome.....	5.50
Mucilage.....	9.00
Gluten.....	7.00
Fungin .....	11.40
Colouring matter .....	3.50
Fecula.....	26.00
Salts .....	3.10
Loss .....	3.50
	—
	100.00 grains.

If we apply to Chemistry for assistance, nothing specific can be obtained : neither the analysis of Wiggers or Wright is satisfactory; because the component parts, are divided, when given to animals, which

do not produce the same phenomena as is produced by the substance given entire. VAUQUELIN adds another result ; he finds that ammonia is disengaged at the heat of boiling water ; but ammonia cannot be the active principle, unless we suppose that it has taken from the other constituents their specific property, which is inadmissible. The result of analysis, by other chemists, is so contradictory as to induce a supposition that the qualities of the grain are greatly influenced by the period at which it is gathered, or by the season being more or less propitious, or the soil more genial, or the mode of its culture different ; be this as it may, if the substance be not uniform in its constituent parts, it will not be in its properties. These observations have been made under the hope that some student of the profession, will make the botanical and chemical properties of this vegetable substance the subject of his investigation, and it would not be unworthy his notice as an inaugural dissertation.

As to the physical appearance of the Ergot, we cannot do better than give it as described by Mr. PEREIRA, in his lectures on *Materia Medica*—"Externally the Ergot has a violet, but internally a dirty white colour. It has a cylindrical form, somewhat tapering at the extremities, slightly curved, with a longitudinal streak on the convex, as well as on the concave side. Its supposed resemblance in form to the spur of a cock, has led to the name "Spurred Rye." Its length is from a few lines to an inch and a half; its breadth from two to three lines. Its odour is peculiar; its taste, at first imperceptible, is afterwards acrid and disagreeable. The external coloured pellicle, seen through a microscope, appears as a moss, strewed with small whitish spots: viewed internally by a microscope, we observe small and brilliant grains like starch. It is lighter than sound rye."

But if the sciences have in a great measure withheld their aid, the observations

of practitioners have shed a little light upon the subject, and hitherto but a little. The first step is to obtain a test of the quality of the Ergot; the following is the result of my observation. If an infusion of the powdered Ergot be made, and kept covered for a few seconds, on removing the cover should the infusion have assumed a deep pink colour, and the whole of the Ergot having settled to the bottom of the vessel, its powers, as a parturifacient, may then be depended upon. But should the infusion appear milky, and mucilaginous, with portions of the Ergot floating upon the surface, partly soluble, and partly insoluble; if, under such circumstances as these, the Ergot be administered, its effects are seldom if ever produced.\*

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\* Considering as I do, the various preparations of Ergot inert, I confine myself to the form of the powder alone, being satisfied from experience, that it is the best form in which to administer this powerful agent.

The Secale Cornutum appears to have been long known and celebrated in Germany, as well as in France, Italy, and America; and probably the peasantry of every country, where Rye forms an ordinary part of the means of subsistence, are acquainted with the properties of its withered ears, and by whom it may have been long known; but it was so late as the year 1777 that it was used by any male practitioner. Des Granges informs us that he had given it about that time, and that the midwives of Lyons were familiar with its effects, and used it in their ordinary practice, but it obtained very little attention, certainly no respect, from practitioners generally, till a much later date, and now, while some are sceptical as to the positive good to be derived from it, others, as Mr. Mitchell, are unbounded in its praise; he states, that the use of instruments will be superseded by its parturient powers; in this we do not fully concur with Mr. Mitchell, but thus far we agree with him; he advises the

use of the Secale Cornutum, in some cases, previous to the dilatation of the os uteri, and our experience justifies us in saying that the practice, with proper obvious precautions, is safe in cases where the dilatation has scarcely commenced, but where a speedy delivery was desirable, we have used it with great satisfaction in every case, without the operations of nature being precipitated, so as to create a wish that the administration had been delayed.

But if we express great confidence in the Secale Cornutum, we cannot treat with disrespect, those who maintain a contrary opinion ; they have, we apprehend, yielded their judgment to theory, rather than experience, but the public shall be in possession of their observations : Dr. Hosack, an American writer, describes the Secale Cornutum as the pulvis ad mortem, for, I believe, the Dr. remarks that its operation, when sufficient to expel the child, in cases where nature is

alone unable to the task, is to produce such a violent contraction of the womb, and consequently convolution and compression of the uterine vessels, as very much to impede if not totally to interrupt the circulation between the mother and child.\* Dr. Blundell, in his lectures on lingering labours, makes the following remarks, "The Secale Cornutum is likely enough to destroy the foetus, if you use it not in the lingering cases, which we are now considering, but when the birth is delayed in consequence of increased resistance, rigidity, narrowing, or unfavourable position of the head. In cases like these, if the Secale Cornutum be exhibited, and have a very lively influence, it may force the child down among the bones of the pelvis where it may die by compression ; not to mention that under the circumstances stated, there must be no small risk of rupturing the uterus."

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\* This objection to the use of the Ergot is satisfactorily proved by Dr. RYAN, in his Manual of Midwifery, to be invalid.

Others have attested that the medicine is inert, and that in whatever dose it is given, no uterine action has followed ; of this class is Le Mercier, who states that he found it altogether inefficacious when given either to quicken the birth of the child or to expel the placenta ; Le Maine, Lysancourt, Beclard, Basset, Legouais, Dupes, M. Chaussier, Desmoreaux, and Gardien, coincide with the opinion expressed by Le Mercier. But we have a still more decided opponent to introduce in the person of M. Capuron, who, with much philosophical pretension, stated to the Academie de Medicine, that he, M. Capuron, regarded the Ergot " As a drug which it is requisite speedily to expunge, from the list of the *Materia Medica*," because, in his judgment, the phosphoric acid it contains would disorder the stomach. Other opponents state certainly much more alarming consequences, if they ever occurred, such as certain death to the mother or the child, the one by rupture of the uterus, the other by the violence of

the action causing the child to be still-born. Such are the assertions of the opponents of this drug, but where is their evidence? Dr. Hosack states his theory to be against the administration of the medicine, but of what importance is theory without facts? As he believed the Ergot to be injurious he was justified in not using it, but he is not justified in expressing an opinion of its properties, without evidence. Dr. Blundell also reasons on its probable effects, but such a system of attack is very harmless, if all its opponents, whether distinguished by the professor's chair, or the plain practitioner, have nothing further to advance, the controversy is ended. We ask for facts. It is on facts that we rely for the establishment of the position we have taken, and the opinions we have advanced, and it is only by facts that they can be controverted. We ask again in what individual case has the Secale Cornutum been injurious, when administered by a practitioner of fair reputation? Until the

answer proves to us that this medicine is of doubtful character, we will not withdraw the evidence we are about to state in its favour.

The first authority we shall mention is that of Dr. Chapman, of America, who informs us that in 200 cases in the practice of himself, Drs. Dewees, and James, the Ergot was used without doing any harm in any respect; and he adds, "no one here believes in the alleged deleterious influence of the article upon the foetus." Notwithstanding these contrary assertions, Mr. Periera remarks, "I am much inclined to believe, partly from my own experience, that the Ergot is injurious, (though not always fatal,) to the child." Our experience leads us to infer that the Secale Cornutum has no injurious effects whatever, either upon the mother or child, in which inference we are seconded, not only by Drs. Chapman, Dewees, and James, but by my much esteemed friend, Dr. M. Ryan, who states in his valuable work,

entitled "Illustrations of Midwifery," "That if Ergot be administered to women in labour, by a skilful medical practitioner, it can never act as a poison to the mother or infant." To these I add the no less valuable testimony of my excellent friend Mr. Bower, surgeon, of this place, who has kindly favoured me with the following cases and remarks.

"Out of 357 cases, of head presentation, in which I have administered the Ergot of Rye, in every stage of parturition, in all states of dilatation of the os uteri, and in many instances of the first child, I never had the slightest reason to regret its exhibition, or believed that it had acted injuriously on the mother or the child, except in two cases. In those cases in which it produced no effect, (being, however, very rare, when properly administered;) or, the effect having subsided without accelerating the delivery, yet I invariably found the labour to progress, or otherwise, as if no interference had

been attempted. The children were born alive and vigorous, except where evident signs existed of their having been dead in utero for some time previous to the commencement of the parturient efforts ; or where it had been deemed necessary for the safety of the mother, to have recourse to embryotomy, from a contracted or deformed pelvis."

"The first case alluded to, occurred in a woman of plethoric habit, and 38 years of age. She fell in labour of her tenth child at four, a. m. ; at eight, the os uteri was found dilated to the size of a half crown, soft, and dilatable ; the head presenting, and the membranes entire. The pains from this time gradually declined in strength and frequency, and at eleven ceased altogether. The membranes were now ruptured, and the Ergot immediately administered ; in ten minutes most excruciating pain was complained of, and referred to the pubic region. On examination, the uterus was found to have arisen

from the pelvis ; and with difficulty it was ascertained that its mouth had contracted to half its former diameter, and become very rigid. The pain continued incessant, and the patient became seriously threatened with apoplexy. She was immediately bled, and a full dose of laudanum administered ; during the collapse occasioned by the bleeding, the child was suddenly expelled in a state of asphyxia, and was with difficulty resuscitated. The mother recovered without any untoward symptoms."

" In the second case, the mother had borne four living children, with great difficulty, her labours having been of long duration, followed by extreme exhaustion. She began to complain about ten, a. m. ; an hour afterwards the os uteri was dilated to the extent of two inches, with soft but thick edges. The head presented naturally, and the motions of the child were frequent and vigorous. The pains recurred, at intervals of from

five to seven minutes, but without any expulsive effects. She continued in this state till eight in the evening, complaining then of great exhaustion. The Ergot was now given, and in twenty minutes its effects on the uterus became apparent, the pains increasing in violence and without intermission. The liquor amnii now escaped, followed by a gush of blood, in quantity about a pint. The pains continued till half-past nine, when the child was immediately expelled, the placenta followed, and no further hæmorrhage ensued. The child was above the average size, and well formed, but quite dead; exhibiting signs of having suffered severe compression, the upper part of the body being of a livid hue, the lips swollen, and the eyes protruding from the orbits in a very remarkable manner; the pulsation in the funis had ceased. The mother slowly but perfectly recovered."

This communication is rendered highly valuable, more by the statements he gives

of the two cases, in which its administration appears to have in some measure disappointed the expectations of my friend. In the first case, the patient was admitted to be plethoric, she may also have been irritable, for the first effect of the medicine was to excite a spasmodyc contraction, of the mouth of the womb, and by giving a shock to the system, impeded the natural flow of blood through it, and induced a sense of fulness in the head, a result which points out the practice to be pursued, and the power of bloodletting, in similar cases. In the other case benefit, rather than injury, was received. The previous labours of the patient had been lingering, and consequently but ill sustained by her feeble frame; so that the suppressing of a threatened hæmorrhage was of high importance, and makes the delay in giving the Secale Cornutum the subject of regret.

Cases like these, showing any deviation from the usual effect, are greatly needed,

in order to the coming at a right estimate of the properties of the medicine under notice. The profession is in want of information of the effect of too strong or too weak a dose ; of the proper period when to administer it ; of its effects on different temperaments, and at various ages ; in what state of health the patient had previously been ; whether the habit was plethoric, or the contrary ; whether the mode of living had been generous or scanty. By a knowledge of the influence of the Secale Cornutum under these various circumstances, previous attention might be given, so that by inducing a proper habit of body, the suffering and the danger of parturition might be greatly diminished. There is another course of observation of equal importance, which demands attention, before a just opinion can be formed of the value of Secale Cornutum on the female economy. Its effects on the system with respect to various diseases require to be proved. Has its administration any effect on puerperal

fever, inflammation, exhaustion, or phlegm-  
asia dolens? Does it increase or diminish the number of patients of each class? Does it aggravate or abate their sufferings? We may add to these, diseases of a different description, as chlorosis and menorrhagia, in both of which it ought more fully to be tried. There yet remains another class of diseases, those of the womb, of one order of which we will venture to state a case. "Mrs. L. had for many successive months, at the ordinary period of menstruation, evacuated an organized substance, much resembling a placenta, but smaller, it might fill a teacup; it was expelled with considerable pain, and the health was considerably disturbed and broken. A drachm of the Secale Cornutum was infused in eight ounces of water, of which four table spoonsful were taken daily, for upwards of six weeks. At the usual period of menstruation, which occurred in a fortnight after the infusion had been taken, but was accompanied

with less pain or hæmorrhage; in a month after this the menstrual discharge was natural, and continued to be so. The last substance my patient parted with I did not see, but it was reported to be fleshy, as before."\*

How it happens that the blighted ear of a spur of grain, in itself so fit to sustain life, should acquire the qualities it unequivocally possesses, is difficult to comprehend. That what is food in one form is a powerful medicine in another, is a proof how much there is yet to learn before medicine will become a science. It is not our design in this pamphlet to discuss any of these points, but to invite attention to them. There is yet another view of the subject worthy of notice, there not being any compound in which this medicine forms a part, by which its good or bad qualities may be estimated.

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\* I am indebted for the above case to my respected friend  
Dr. JARROLD.

In the course of my practice the *Secale Cornutum* has been administered to 1500 patients, without selecting, or in any way giving a preference to, any individual case, or professing that knowledge by which a partiality might have been given, for so little has been published on the subject, that, in common with other practitioners, feelings of hesitation have sometimes passed in my mind when administering a drug of which nothing was known but the general character of its common effects. Yet, under these circumstances I have administered it to 1500 patients, as before mentioned, with the most satisfactory results: and that a mode of treatment which has proved so safe, and so salutary, and which, to a great extent, has lessened the period of suffering, may become a great object to medical practitioners, this attempt to excite more general attention to the subject has been made. In several instances of the 1500 that have been mentioned, there were several rendered tedious, from insufficient uterine action, arising from

various causes, as protracted disease, excessive discharges, depression of the mind, giving birth to a large family, and other sources of exhaustion. Here we may notice a remarkable provision of nature; the womb is for a specific object, and its office for a limited period; the energy supplied to its muscular organization is consequently under the same provision, it also is limited; so that when its place in the economy of nature is no longer required, its capacity ceases, and debility succeeds to strength; no other muscular fibres are under the same law: those of the arm strengthen with use, but the muscular tissue of the uterus is governed by another agency, more adapted to its office. Muscular power depends upon two sources, one which is the principle of life, which is in itself greater in some individuals than in others, the other is a peculiar power communicated by the nerves connected with the uterus; how to trace the state of the uterus to either of these causes is difficult, but as a wise provision of nature. These being deficient a protracted labour

may be expected, and the Secale Cornutum safely administered.

It is evident that the operation of Secale Cornutum is specific; that the seat of its operation is the uterus, and that it assists the energies of nature in expelling the child; from these considerations it probably arises, that cases of a tardy labour are so generally noticed as most favourable to the exhibition of the Secale Cornutum; but as this is a direct power for a direct end, it admits of a general, not a partial application, and demands extensive observation, to ascertain the full extent of its virtues, and the means by which it may be advantageously applied in all ordinary cases. That which promises to take from the pregnant woman her dismay and dread of the hour as it approaches, which may give life to the child at the expence of her own, is worthy the attention of all whose studies can assist the enquiry.

There is no joy so great as a mother's, when she nurtures her babe, and there is no moral power like hers ; if she gives life she also gives character ; so great is her power over the character of her children that it sheds its influence over the whole period of their existence ; the disposition of the man may be read in the child, so that it would become the magistrate to rebuke the parents of every young offender against the peace of society ; the mother's neglect of duty in not enforcing early obedience is the source of much future evil : pardon these digressions.

The efforts of the profession will doubtless ere long ascertain the full merits of the medicine in question, and if our expectations are realized, will place the Secale Cornutum amongst the most important discoveries in medicine, and mark the age in which its merits were established in the same page with those that record the discovery of the VACCINE VIRUS.

We must now return more directly to the subject of parturition. It has been an established practice to administer stimulants in cases of great feebleness and depression ; if this be left with the nurse it is often done with indiscretion, if not with injury ; but when a considerable degree of faintness is present, with a cold and pallid surface of the body, and the uterine contractions feeble, attended with depression of spirits ; then, under these circumstances, stimulants are called for : there has hitherto been no alternative : whatever may be the future evil the present must be overcome, and those stimulants have been habitually given, which act by the fever they create ; but Secale Cornutum rouses the system far more certainly than any such stimulant, without raising the pulse ; it does not act by a circuitous influence ; nor does it induce a morbid arterial action, and thus rouse the torpid powers of the uterus, but its action is direct and specific, and from these circumstances we anticipate its complete adaptation in all natural

labours, to the exclusion of stimulants. But we advance a step further, and state that Secale Cornutum is not only the most powerful and safe partus accelerator, but that it is also a powerful dilator of the os uteri. Chevreul appears to have been of this opinion, as he reports 16 cases in which a dilatation of the mouth of the womb succeeded the use of the Secale Cornutum: this fact does not appear to have attracted much attention, and therefore waits further evidence; we may however state a case or two in point. Case first.—I was called upon at 11 a. m. September 26th, 1838, to attend Mrs. R. aged 26, a woman of stout and robust habit, then in labour of her fourth child. I ascertained on my arrival, from her own account, that she had been in labour more than two weeks. I found the os uteri elongated, yet thin, resembling very much the teat of the cow; it readily admitted the entrance of the finger, by which a slight protrusion of the membranes for a short distance during

each pain was perceptible. Under these circumstances I ordered an anodyne draught to be given immediately. 27th, I was again summoned this morning, about 9 a. m. ; the pains were now considerably increased, but I found the os uteri in much the same state as yesterday, the pulse being full and strong. I bled her to sixteen ounces, which procured a temporary cessation from pain; I then ordered the following :

Tinct. Opii, 3j.

Aqua Menthae 3j.—M. Capt. statim.

And requested that I might be sent for on a return of pain. 28th. This day, about 6 a. m. I found my patient suffering from acute pain; her bowels had been freely opened, and the pulse was slow and weak. I could perceive no alteration in the condition of the os uteri, and having tried all the means that have been recommended, or which I could myself suggest, with the view of inducing regular uterine action, and finding them of no avail, I determined upon the administration of the Ergot, and immediately

gave Mrs. R. one scruple, in half an ounce of tepid water ; in ten minutes after its use, the pains assumed a more truly uterine character, and I found the membranes protruding beyond the elongated os uteri, which was much reduced in length. The labour after this proceeded gradually, and in the course of half an hour from the first employment of the Ergot she was delivered of a living son, both of whom did well. Case second.— On the 4th of July, 1838, at 4 a. m. I was requested to visit Mrs. K. aged 28, a stout and healthy woman, in labour of her second child ; on examination I found the os uteri dilated to the size of a crown piece, thick, and unyielding : on enquiry I found that my patient had had pains for more than two days, which had returned at regular intervals during that time. Her pulse being full and strong I bled her to twenty ounces, which was followed by considerable relief ; after waiting for some time, and the pain not returning, I left her, and desired to be

sent for on the least return of pain. About 6 p. m. of the same day, I was again requested to attend when I found the membranes protruding beyond the os uteri, which was much in the same state as described at my last visit. From the restless condition of my patient and her friends, who requested me to give her some "coffee,"\* and from a knowledge of its efficacy in similar cases I at once acceded to their solicitations, and gave her one scruple of the Ergot; in ten minutes after, the pains became more frequent, the mouth of the womb softer and more dilated, and in twenty minutes after its being taken all anxiety terminated in the birth of a boy; they both did well.

In both of these cases the influence of the medicine was too immediate to admit of a doubt that it was the efficient cause of the change which was witnessed;

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\* As the Ergot is called in this Neighbourhood.

the bleedings had relieved the pain but did not obviously forward the delivery.

These cases hold out a strong inducement to let blood early, and speedily after to give the prescribed medicine in cases of a similar bearing. Their evidence is also strongly in favour of the means used having the power to dilate the os uteri, and to confirm the fact of the Ergot not being injurious either to the mother or the child; but our attention has been more directed to these cases because of the current opinion that Secale Cornutum has no direct influence on the os uteri. Chevreul is the only writer we have met with whose practice in this respect accords with our own; and he further thinks its use applicable in the early stage of all natural labours, an opinion with which I fully concur, provided the patient has in the last months of pregnancy submitted to a prescribed diet, and if advised has taken a few doses of medicine and lost a few ounces of blood; by these means, simple as they may appear, the sorrow and

danger of child-birth will be greatly lessened, and its duration the subject, not of uncertainty, but of calculation.

As the subject is one of great importance the experience of any individual is worthy of record, on this ground we venture to state such other remarks as have arisen from our practice; we first notice its effects in a natural labour. As soon as the os uteri has been found to be at all dilated, if the pelvis be well formed, the pains recurring at long intervals, and the mind tranquil, then without hesitation I give fifteen grains of the powdered Rye in half an ounce of tepid water; in a quarter of an hour after, if uterine action has not commenced, the dose is repeated, but this is not frequently required; in most cases a very short period elapses after the first dose before pain is referred to the pubic region, striking from thence to the back; the pains are slight at their commencement, and recur every two or three minutes, gradually increasing in

strength and frequency till the os uteri is dilated to the size of a crown piece ; the pains after this gradually decline and frequently altogether subside ; when this happens the influence of the first dose may be considered as having passed, affording important information ; first, that the influence of the medicine is of a limited duration ; secondly, that the gradual manner in which the action advances to its full strength and then as gradually abates, is a safeguard in preventing a rupture of the uterus, and in lessening the tendency to hæmorrhage ; the slight action at first, prepares the uterus for what follows. The pains having nearly ceased, the patient is in a fit state for a second dose which should be stronger than the first, but not exceeding one drachm, (we have in many cases given two scruples with success,) which renews the action of the uterus, and the child is in a short time expelled. When the foetal head is born the delivery of the body of the child ought to be retarded

rather than accelerated, thereby allowing the uterus to contract gradually upon its contents, by which a retention of the placenta rarely occurs from irregular action of any portion of the muscular fibres of the uterus. I likewise (after dividing the funis) commence by gentle traction with the umbilical chord to deliver the placenta, which is generally effected in a few seconds, (unless morbidly adhered.) If the membranes are ruptured a second dose is often unnecessary, but always safe.

This practice we have followed for twelve years, and in that period our confidence in the drug has been without interruption increasing ; much suffering, much anxiety, and much time has been saved. Some writers in the face of the evidence they command deny the power of the Secale Cornutum to rouse the action of the uterus, of whom is Le Mercier, Maine, and other writers already quoted. Several French surgeons express the same opinion, the fact we presume to

be that they have not been furnished with the proper article. The power of the medicine is too well established to justify attention to such objections.

Having in a brief way related our practice, we may notice some other cases to which the medicine in question is applicable. The first I shall notice relates to those cases in which it is desirable to promote premature labour; two have happened in my practice, in which the medicine was used with full success. Both cases were at the seventh month, and to both the draught was administered three successive days, at the end of which time labour commenced, and in ten hours terminated; happily both mothers and children did well. Both the women had a distorted pelvis to an extent which rendered the operation of craniotomy necessary in their previous labours, one having been pregnant three, the other four times: so that the lives of two children have been thus saved to the credit of the means

made use of, and with more safety to the patients than any method previously within the power of the medical attendant. In these cases the practice of Dr. F. Ramsbottom was followed. "I have before me," says Dr. R., "the notes of many cases in which labour was induced *solum secalis cornuti ope*. The following is the plan I have generally pursued, and the formula I now give you is as good as can be used.

B. Secalis Cornuti recentis, in pulverem redacti, 3ijj. ;  
Aque ferventis. 3vij. Infunde vase leviter clauso per  
semihoram. et

B. Liquoris Colati, 3viiss. ; Acidi Sulphurici Dil. 3ss;  
Syrupi, 3ij. Spiritus Cinnamoni, 3ij. M. sumantur  
cochl. duo 4ta quaque hora.

*Partus dolores decem vel duodecim elapsis horis agram  
vexare, et post singulas medicinæ potiones clare augeri, sæpe  
invenivi; aliquando etiam oriri primo potato haestu.*

Ingleby, Merriman, and several others, as quoted by Mr. Wright, whose paper I have had occasion to refer to before, are of the like opinion. Drs. Hall, of St. Albans, and Mitchell contend that the Ergot has not the power of producing

abortion, as mentioned by Mr. Wright, who concludes that his "own observations do not justify him in saying whether or not Ergot will induce abortion in the human subject, never having had occasion for its employment, but," says Mr. W. "I have seen many instances in which its administration in the early period of parturienty was not followed by any increased uterine action; and by a train of analogical reasoning, I should certainly infer that it has no tendency to induce premature delivery. And I believe the experience of men is in favour of its increasing but not originating the pains of labour. This I believe to be the rule, but it is no doubt liable to exception."

That conflicting opinions still exist, in relation to the power of Secale Cornutum on the uterus prior to its contraction having commenced, cannot be a matter of surprise. What new mode of treatment has escaped opposition? In the treatment of fever various means have

been recommended, and which of them has not had its opponent? But opposition only confirms the result and extends the knowledge of a beneficial suggestion. Mr. Wright may contend that Secale Cornutum has not the power to produce premature labour, but he does not inform us in how many instances it has failed; indeed, he appears never to have used it with that purpose, if he has not succeeded he will do well to state the cases; the public claims such information. Many individuals have been permitted to go to the full period of gestation, rather than adopt this method, because to them of doubtful result, but which we are convinced, if properly conducted, would have ended in the safety both of the mother and the child: and from the following report, in addition to my own experience, I am emboldened to make this remark. A medical friend, since this pamphlet was written, asked my opinion respecting a patient then pregnant, in whom he had attempted to pro-

duce premature labour in a preceding pregnancy, by the administration of Secale Cornutum, but was disappointed in the result. I acquainted him of the test whereby he might judge of the genuineness of the Ergot, and the plan mentioned by Dr. Ramsbotham, and adopted by myself; I afterwards was informed that my suggestions had been acted upon, and had exceeded his most sanguine expectation, for the child was born alive on the third day after commencing to take the Secale Cornutum, with very little distress to the mother: the mother and child did well. From our experience of the effects of the Ergot in similar cases, we are of opinion that it has the power to originate uterine contraction; if in all cases it has not succeeded, the practitioner, in publishing a case, owes it to himself to state fully the particulars, that some opinion may be formed of the cause of the failure. We are urgent on this subject because in all cases where craniotomy has been required, life has necessarily been lost; it

is assuredly of the highest importance that the life of the child should be attempted to be preserved, while that of the mother be not exposed to danger. Who, till every other means has failed, is justified in taking life?

The following cases which have occurred in my practice since the above was written are in point. Case first.—I was desired to attend, October 18th, 1840, Mrs. O. aged 26, of an irritable habit, then in labour of her fourth child. On my arrival I was informed that the waters had come away the day before, and that she had not had any pain prior to, or since the waters were discharged. The os uteri was dilated to the disc of sixpence, its edges thin, &c. I gave her 15 grains of the powdered Ergot, and in a few minutes after it had been taken she complained of a continued pain in the back, accompanied with a bearing down sensation, both of which continued until the os uteri was dilated to the size of a crown

piece, when the pain and bearing down gradually subsided. I now administered to my patient half a drachm of the powdered Ergot with complete success, for in twenty minutes after the second dose had been given she was delivered of a fine daughter. Both mother and child did well.

Case second.—I was called upon, October 20th, 1840, to attend Mrs. H., aged 30, a stout and healthy woman, then supposed to be in labour of her sixth child. On my arrival I found her suffering from attacks of spasm in the region of the stomach, which recurred every two or three minutes with such severity as to cause convulsive twitching of the arms and legs. On enquiry I learned that on attempting to rise from her chair the preceding evening, a large gush of water made its escape, and in two hours after spasms commenced. During one of the paroxysms on examination the os uteri was found dilated to the size of a shilling, thin and tense; on the recession of the spasm, the os uteri became soft and flabby. I then gave her 15 grains

of the powdered Secale Cornutum, with the view of inducing regular uterine action ; and in a few minutes after its administration the pains were of a decidedly uterine character, evidenced by the pain being referred to the pubic region, &c. &c.; and which continued to recur at regular intervals, with an evident intermission, until the os uteri was fully dilated, when the pains altogether subsided. At this period I repeated the dose of Secale Cornutum, (giving 3ss) and in a few minutes afterwards it caused a renewal of uterine action, and a male child was shortly after expelled. They both did well.

Such has been the result of my practice, from which it may reasonably be inferred that the uterus may be brought under the specific influence of the Secale Cornutum, by commencing with a small dose, and repeating the dose, (not exceeding 15 grains until the os uteri be considerably dilated,) such being the effect which we

have witnessed. We believe that those who have used it and found its action so violent as to threaten a rupture of the uterus, or to cause the death of the child, have given it in too large a dose, thereby preventing that salutary change they anticipated, which caused them to pour forth their anathemas against its use, as dangerous both to the mother and the child. We are satisfied that moderate doses do produce uterine action, and are convinced, from the foregoing cases, that practitioners need not have to complain of its unmanageable or inefficient effects.

In uterine hæmorrhage its action is of the first importance, by checking the flow of blood, which medical practitioners too often witness. On the authority of Dr. Neale it appears that the American physicians were the first to proclaim the virtues of the Ergot in cases of this kind, and whether it be used in hæmorrhage arising in the earlier or later months of pregnancy, during or after parturition,

it will be found one of the very best auxiliaries, as it does not preclude the employment of other means. As a prophylactic ample experience justifies a reliance on its powers in suppressing haemorrhage, so that its administration ought never to be delayed to those who are of a haemorrhagic tendency. We have repeatedly witnessed its good effects when given to women, some ten or twenty minutes previous to the delivery, with whom haemorrhage had in previous confinements occurred, a stronger testimony of its worth than this cannot well be given. Even Hosack, who is far from being partial to this remedy, considers it as especially useful in flooding arising from the placenta being attached over the cervix uteri, for he observes, "there is less danger in employing the Ergot, (the mouth of the uterus being dilated,) than in introducing the hand and turning the child."

In presentations of the placenta attended with deficient uterine action, with a

considerable degree of depression of the vital powers, I have given the Ergot with the view of inducing that permanent contraction which is so essential to the patient's security. The subjoined case will in some measure illustrate its efficacy. Mrs. P., aged 36, of an irritable habit, had already suffered much from having aborted in the fourth month of gestation, in three of her last pregnancies; all of which had been attended with considerable loss of blood. Being called to her on the 14th of October, 1839, about 4 p. m., I found the os uteri dilated to the size of a sixpence, with a considerable portion of the placenta placed over the os uteri, which was detached and pendulous,—membranes entire. From the strictest examination no trace of any presenting part of the child could be found. On enquiry I was informed that she had had pains of a severe character for several hours, and that they occurred at short intervals; and I was informed that about half an hour previous to my arrival, a

considerable quantity of blood had been parted with. The vital powers of my patient having been reduced from previous hæmorrhages together with her present low condition, I deemed it proper to administer the Ergot, from a conviction of its utility ; I prescribed for her half a drachm of the Pulv. Secale Cor. In about fifteen minutes after its administration, she complained of a bearing down sensation, on examination I found the os uteri dilated to the size of a half-crown piece, with the head presenting naturally. Having to leave the parturient chamber for a short time, my patient was during my absence raised from the recumbent to the sitting posture, which effort had nigh cost her her life ; for immediately on raising her a large gush of blood followed, attended with a considerable degree of collapse : under this emergency I ordered Brandy with Ergot, at the same time rupturing the membranes, when a considerable quantity of Liq. Amnii escaped, deeply tinged with blood. Reaction in

some measure having been restored, I trusted that this step would have placed my patient in a better position by allowing the uterus to contract upon the body of the child, at the same time that the mouths of the bleeding vessels would be compressed. In this however I was disappointed, for the haemorrhage continued even more than before. I now determined upon delivery; which was effected by introducing the hand in utero, taking hold of the feet, and bringing them down, in a few minutes the body of the child followed. The placental mass was easily detached from its partial adhesion to the inner surface of the cervix uteri. The child (a daughter,) though small, was born alive and vigorous. It would be a work of supererogation to enumerate each day's progress towards recovery; suffice it to say she continued for the first fortnight to be troubled with a slight haemorrhage, which was overcome by the administration of the Secale Cornutum, in doses of 5 grains, thrice a day. Her recovery was slow, but perfect.

We consider it of the first importance in such cases to bring the uterus under the influence of the Ergot before the operation of turning be commenced, for a considerable difficulty as well as risk attends the operation when unaided by the proper contractions of the uterus. In retention of the placenta from a portion of the circular fibres of the uterus, being in a state of tonic contraction, and the rest of the organ labouring under atony, which is generally denominated hour-glass contraction, the ordinary practice is rather objectionable; for this remark I have the authority of my much esteemed friend Dr. Radford, to whom I have the honour to dedicate this Essay, who was the first, I believe, to call the attention of the profession to the subject. He states in his lectures on midwifery, that the contracting part of the uterus is an healthy action, and that it is our duty to induce it as far as possible, by friction, pressure, the infusion of Ergot, &c. The natural contraction of the uterus will then become sufficient

to throw off the placenta. Instead therefore of attending to the routine of practice, by dilating the supposed stricture, by giving opium, &c., it is more advisable to administer two scruples of the Pulv. Secale Cor., which is generally found sufficient to excite a renewal of the uterine action, and to expel its contents.

My attendance was requested March 8th, 1833, upon Mrs. H., aged 24, who was reported to be dying from hæmorrhage. On my arrival I found that she had been delivered twenty minutes previous to my seeing her, and that the hæmorrhage commenced immediately after the birth of the child. On placing my hand over the abdomen, the uterus was firmly contracted; and on an examination per vaginam, a considerable portion of the placenta was found lying loose in the vagina, which I attempted to extract; but on finding it impossible to bring the placenta away entire, without introducing my hand in utero, I passed my left hand

into the vagina, and on endeavouring to follow the detained portion of the placenta, was opposed by a band of the circular fibres of the uterus, which were in a highly contracted condition ; so much so, that it was impossible to introduce the tip of the fore-finger beyond the strictured part. The hæmorrhage continued unabated, although cold applications were assiduously applied to the abdomen. I now decided upon the administration of the Secale Cornutum, and gave her 2 scruples of the Pulv. Secale Cor., and in twenty minutes after, the placental mass was suddenly expelled. The after-pains were so violent, as to call for the use of large doses of opium to lessen their severity. The patient perfectly recovered. In the foregoing case delay might have been of fatal consequence, inasmuch as the life of my patient was placed in the most imminent danger, from the great and sudden loss of blood. In cases of a like character, whether attended or unattended by hæmorrhage, it is of the first importance

to induce an healthy contraction of the uterus; without which a considerable amount of danger is always to be apprehended.

The Ergot, we feel assured, from an extensive knowledge of its beneficial effects, has the power to produce that tonic condition of the uterus, which is so desirable in all such cases. The length of time which is required to overcome the stricture by the means usually employed, viz., friction, opium, &c. &c., must, I apprehend, render them often ineffectual.

There yet remains one other circumstance of the many attending on parturition, in which the Secale Cornutum is of unequivocal benefit; we allude to the descending of the umbilical cord so low in the vagina as to cause an obstruction to the flow of blood through it, and thus to occasion the death of the child, which must inevitably ensue if it be found impracticable

to replace the cord, hence a speedy delivery is most desirable. We have found by the prompt administration of Secale Cornutum that this fatal result has generally been prevented. The fact of Secale Cornutum being the only means yet known of saving life under these circumstances, is in itself sufficient to render it a highly valuable drug. The bitter invectives against this medicine ought to be suspended till the proper and safe way of its administration shall have been fully ascertained.

During my attendance upon Mrs. A., when the os uteri was fully dilated, and the membranes ruptured, the umbilical cord immediately descended below the os externum, the pains which were at first regular and tolerably strong, when the membranes gave way ceased altogether, but after some time they recurred and were feeble and inefficient. On examination the foetal head was situated high up in the pelvic cavity, and on introducing the hand per vaginum, it was found that the larger fontanel

rested on the pubis, and the nose of the child was situated upon the promontory of the sacrum. I pressed by means of the fore finger of the left hand gently against the edges of the two parietal bones, thereby forming a fulcrum by which I was enabled to raise the forehead to the right sacro-iliac symphysis, while the occiput was turned to the left acetabulum, reducing it to a natural presentation. On endeavouring to replace the cord, (in which the pulsation had nearly ceased,) I was however disappointed, for as often as it was reduced it again descended. Perceiving that a speedy delivery was necessary to the safety of the child, and having experienced in similar cases the advantage to be derived from Secale Cornutum, I gave my patient 2 scruples of the powdered Ergot, and in a short time after, the uterus was strongly excited, the foetal head rapidly descended, and a male child was shortly expelled, to all appearance dead, it was however with difficulty resuscitated. The mother and child did well.

We do not argue in all cases of a like character to the preceding, that the Secale Cornutum has the power to save the life of the child, but from our experience of the benefit to be derived from the administration of the Secale Cornutum in cases of a like character, we consider it to be the duty of the obstetrician to employ those means whereby there may be any possibility of saving life. If the pelvis be well formed, the os uteri fully dilated, and the slightest pulsation be felt in the cord, together with it being found impossible to replace it, the Secale Cornutum having the power to accelerate the birth of the child, (thereby giving it a decided advantage over other means;) its administration ought never to be delayed.

It may be imagined by all those who are sceptical as to the action of Secale Cornutum on the uterus, that we have lauded it too much, and placed too great a reliance upon its powers; but we speak from experience of the medicine, and feel

satisfied that if its administration be rightly conducted, its effects on the uterus will be manifested. Enough we hope has been shown to prove that the premises upon which we have based our opinions are founded upon legitimate conclusions. Through the whole of our practice we have carefully watched the operations of this medicine, from a conviction that conflicting opinions would be published by practitioners entitled to attention, by which we might be misled. Our observations have been conclusive and satisfactory to our own mind, and should they be the means of giving a more decided opinion to any who have been perplexed by opposite statements, our object will in some measure be accomplished.

But in these remarks our main object has been to call the attention especially of the younger part of the medical profession to the subject as one of great interest to themselves, and of promised benefit to the public. Other important suggestions have

been given, and many improvements made to various branches of the profession within a recent period; but surely nothing of half the importance with the subject before us has of late been treated of. If but a portion of the good which some anticipate be realized, and I confess myself to be with them in their expectation; that portion will open a passage to a still further advance, and every step will accumulate additional evidence for its general reception; an event desired, for when life is in jeopardy, wisdom, experience, and confidence, are all alike demanded. It waits with the profession to afford this evidence; much still remains to be done. Deviations from the ordinary effects of the medicine claim the first attention, and should be traced if possible to their source; other branches of information will necessarily arise from the pursuit of the subject. The public have a right to urge this claim that our art may approach at least in this branch of it, in some degree to the precision of a science; and

that thus hours of labour, if hours be required, may with considerable certainty be estimated, and the time of delivery assured; we now hear of days of labour, then it will be protracted if it reaches hours. The fact that the action of Secale Cornutum is first gentle, then more severe, but never probably so violent as sometimes happens in ordinary labours, is a property of the highest importance, because it ensures safety by preparing the uterus for its more severe efforts; and should any means be discovered by which its strongest action may be controlled, a greater good can scarcely be gained for the public welfare, as it will at once relieve the attendant from anxiety and the patient from peril.

To render natural labour safe and easy is a desideratum of no small moment, and such an attainment is fast approaching. Sorrow is the inevitable, the irreversible lot of her who becomes a mother, but sorrow is not necessarily accompanied by danger;

danger at such a period is not agreeable to the analogy of nature; a mother's energies are concentrated in the protection of the life of her offspring, the old are their guardians, and make a willing offering of their lives to rescue them from danger. What mother is deterred from performing a parent's duty to a child dying of some malignant disease? But, although the mother shields her child by presenting herself to an impending danger, yet this ordinance of nature does not reach to the period of birth, and hence we say that it is not in the course of nature that the giving of life should be the occasion of death.— Death has other means to effect its purpose than to break in upon and violate the first command that was given, to increase and multiply, so that it may with propriety be imagined that the Creator has not made his own command the instrument of its own violation. Child-birth is a sorrow, but it does not seem to be in itself intended as a messenger of death; ignorance has suffered this evil to exist,

death lies at its door; we speak with reverence; nature does not mock the mother by aiding her through the months of gestation, then to forsake her, that she and her offspring may find a common grave. That which is doing in medicine bids fair to divest the parturient woman of much of this anxiety, by removing from her her greatest source of fear; her fortitude braves suffering, but the apprehension of death disarms and prostrates her mind; this she may hope will soon be banished, and that child-birth will be placed among those other trophies of medical science, which has rescued from death those afflicted with disease once thought incurable.

